

HERMENEUTICS AND SCIENCE

BOSTON STUDIES IN THE PHILOSOPHY OF SCIENCE

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HERMENEUTICS AND SCIENCE

Proceedings of the First Conference of the
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HERMENEUTICS AND THE SCIENCES

Ladies and Gentlemen,

It has given me considerable pleasure to accept the request of the organizers to give a brief opening speech. It is an honor for me to address the participants of this conference, both in my capacity of acting general secretary of the *Hungarian Philosophical Association*, whose aim is to promote philosophical scholarship and dialogue, to encourage and support initiatives of this sort on a national as well as international scale; and, more personally, as professor of philosophy at Eötvös University, Budapest, with research interests in 19th and 20th century philosophy, with special regard to phenomenology and hermeneutics.

In the first place let me extend a hearty welcome to you who have come here from very different countries, East and West, Europe and overseas; let me greet you also on behalf of the organizers, a group mostly of younger colleagues who have shown bold resolution in undertaking this initiative, as well as considerable persistence in bringing the various stages of its realization to an end. I wish to thank them all – as well as the *Loránd Eötvös Physical Society*, under whose aegis this conference has been organized, and our *National Committee for Technological Development* (OMFB), which sponsors it – for having made it possible for us to discuss important philosophical and scientific issues in the coming days in this beautiful and historic site of Western Hungary.

To what I said by way of a self-presentation above let me add immediately – so as to give you my philosophical I.D., as it were – that I belong to the group of the “continentalists.” However, I tend to identify myself with those continentalists who do not think that, for the very fact of having continental philosophy as their major field of research or interest, it should also be their business to despise analytic philosophy or philosophy of science as a kind of “mere logic chopping.”¹ Continentalists of the kind I identify myself with do therefore tend to, and are willing to, engage in discussion with analytic philosophers or philosophers of science – understandably, with those analytic philosophers or philosophers of science who do not think that, for the very fact of pursuing analytic philosophy or philosophy of science as their major field of research or interest, it should also be their business to despise continental philosophy as a kind of “mysticism,” “irrationalism,” or even (if you like) “Teutonic fog.”² By saying this I think I have not in the least left hermeneu-

ground – indeed, I remained faithful to it – insofar as the fundamental hermeneutic comportment from Heidegger to Rorty is typically seen to lie in openness to the Other, to the strange, or the unfamiliar.³

Having said this as a personal confession, by way of an opening remark, let me say a few introductory words, first, about hermeneutics itself in a broader context, that is, of the way I conceive of hermeneutics' having come to be one of the important philosophical trends of our century; then, second, about the proper theme which this conference is to address in the following days – hermeneutics' specific significance or relevance with regard to the sciences.

* * *

I.1. In its traditional sense, hermeneutics has been understood as being the theory of rules which govern the *interpretation of texts*, and which should permit us to establish their possibly original or objective meaning.⁴ The problem of the interpretation of texts handed down by the tradition is about as old as philosophy itself. Due to a number of circumstances, such as the cultural crisis of our century, the expansion of technology and world civilization, the loss of sense of classical humanistic tradition, etc., the problems of interpretation have come to assume an ever more important role in recent philosophy. The hermeneutic problematic has emerged as a central topic, and has been given autonomous philosophical elaboration, in the thought of at least two of the most influential philosophers of our century: Heidegger and Gadamer. Paralleling the well-known “linguistic turn,” what they carried out may aptly be called *the hermeneutic turn of philosophy*. This implies that interpretation is no more seen to be connected (either primarily or exclusively) to an auxiliary discipline of the human sciences – to its task of providing the rules of the interpretation of (classical) texts. Rather, it emerges as an autonomous philosophical stance insofar as man is viewed in all kinds of everyday activities – not only in handling classical texts pertaining to the compartment of human sciences – as an interpreting animal. *The hermeneutic turn of philosophy* thus implies far more than the mere fact that philosophical thinking has now come to center its reflection upon the interpretation of texts, including those pertaining to the hermeneutic tradition – the texts of authors who have exposed, in various ages and places, various doctrines and concepts of interpretation. What it implies is, rather, that the problem of interpretation is looked upon as a philosophical problem *sui generis*, whereby philosophy itself gains a kind of hermeneutical self-awareness and undergoes a deep transformation. Thus transformed hermeneutically, philosophy re-defines its relation to the classical (hermeneutical) tradition, no less than to the other disciplines. Hermeneutical reflection has nowadays become, in a very broad sense, a kind of *medium*, or element, of philosophy – an analytical device, as it were, or a certain *comportment* – which has a diffuse presence permeating the most varied branches and fields of philosophical activity. Thereby, the concept itself has been taking on ever more complex and differentiated meanings, undergoing, as it were, a certain proliferation.

I.2. Let me now focus on some more technical aspects of the history of this turn. In its attempt to challenge the positivistic idea of unified science as well as to defend the autonomy of the human sciences, epistemologically oriented German Neo-Kantian philosophy had come to distinguish between two autonomous kinds of scientific knowledge or cognition by the turn of the century: the one providing knowledge of general laws and characteristic of the natural sciences, the other making us acquainted with singular events and proper to the kind of knowledge we have in human sciences [*Geisteswissenschaften*]. These two forms of knowledge were sometimes also distinguished terminologically, labeled as explanation [*Erklärung*] and understanding [*Verstehen*]. Dilthey defined understanding as “the process by which we know some inner content from signs received by the senses from outside,”⁵ and interpretation was for him “the artistic [arts-like] understanding of life manifestations objectified in written form.”⁶ He conceived hermeneutics as being “the methodology or art of understanding recorded expressions.”⁷

For Heidegger hermeneutics is no longer *wissenschaftstheoretisch*-oriented (or validity-oriented). This follows from his basic tendency to challenge the priority of epistemology and theory of science in philosophy, and to reaffirm the primacy of ontology. One of his main arguments is that scientific cognition is preceded by, and derived from, man’s Being-in-the-world.

In accordance with this reconception of philosophy, Heidegger no longer views understanding and interpretation as just regional concepts, confined to particular domains – to the methodology of the human sciences. Rather, he views man in all the modes of his everyday activities as an interpreting being. The radicality of this change would be wholly misunderstood and to a considerable extent underestimated if we conceived of it in terms whereby our description of one being among many others has been altered, implying that our conception of the others remains basically the same. Rather, what this change implies is that all our habitual conceptual strategies and linguistic devices, together with the underlying comportment and world view, are to undergo an overall reconsideration and reconception – one often called destruction or deconstruction.

Understanding is for Heidegger not a way of knowing, proper to the human studies, in contradistinction to explanation as the way of knowledge characteristic of the natural sciences, but is rather a way of being of the being called human. It precedes the epistemological kind of understanding and, therefore, the very epistemological distinction between “understanding” and “explanation.”⁸ Humans are understanding, so to speak, all along. What they understand are not matters of fact out there in the world, but the way they find themselves in the world, involved in it.

Man’s fundamental mode of being, Heidegger claims in *Being and Time*, is Being-in-the-world. One’s original relation to things emerging in one’s environment involves using, handling, employing, and arranging rather than “knowing” them. The practical way of having to deal with things presupposes a preliminary understanding of them – in particular, of what they are for. Understanding is not something to be attained first in science – be it natural or

human – but rather the other way round: the knowing relation to the world is a derivative one. Heidegger shows in a series of analyses how, in virtue of what modifications of Being-in-the-world, man's knowing relation to the world emerges – how, for example, in order for a thing to become an object of knowledge or scientific research, our preliminary access to it, that is, our way of having to deal with it, must have undergone a specific modification. With regard to our hermeneutic problematic and the re-evaluation of the concept of understanding, we may say: knowledge derives from understanding and not *vice versa*. Understanding is not a theoretical process, something that comes at the end of a methodologically sophisticated cognitive procedure, but is primarily a kind of coping with a mode of being. Understanding is basically having always already understood.

With regard to hermeneutics, this re-conception of philosophy implies that interpretation does not presuppose “recorded expressions,” but *conversely*: making assertions whatsoever presupposes preliminary interpretation. Assertion is for Heidegger a derivative mode of understanding.⁹ A hammer, e.g., is primarily encountered *as* a tool for pounding nails into the wall; and in this case it has always already been preliminarily understood, or interpreted, as such. If the hammer proves to be too heavy, “[i]nterpretation is carried out primordially not in a theoretical statement but in an action [...]–laying aside the unsuitable tool, or exchanging it, ‘without wasting a word’ “. ¹⁰ To put it bluntly: for Heidegger, in order to do interpreting one need not speak or make assertions, but in order to speak one must have done interpreting.

What Heidegger offers as an alternative to theoretical concepts and theoretical knowing is what he calls “hermeneutical concepts,” or – in contrast to pure or theoretical intuition – “hermeneutical intuition.”¹¹ “Hermeneutics,” “hermeneutical,” have the meaning of rival concepts to “theory,” “theoretical,” understood in terms of “theoretically neutral.” Generally speaking, it is due to Heidegger's search for proper methodological devices regarding an adequate conceptual expression of “factual life” that his hermeneutic outlook emerges in his postwar lecture courses. Theoretically (and ahistorically), neutral knowledge is opposed to, and gives way to, existentially (and historically) involved understanding (or pre-understanding) and interpreting – whereby knowledge becomes at best a subdivision of understanding. All these efforts are in the service of seizing upon “life.” The main character of the latter is claimed to be concern (*Sorge*) rather than knowledge.¹²

The description of life, or “facticity” obtains an overall hermeneutic character precisely because of the insight that interpretation cannot be regarded as something added, as a kind of extension or annex, as it were, to some theoretically neutral (and allegedly “objective”) description of a state of affairs: rather, preliminary “interpretedness” is inherent in all kinds of description, in all kinds of seeing, saying, and experiencing.¹³ If there is no “pure” theory (for “theory” is a derivative mode of being or comportment of one particular being called human), there is no pure description either. What this insight implies for an adequate description of life or facticity is that theoretical concepts, as well as the language theory speaks, should be abandoned in favor of a language and

conceptuality growing out of everyday life and able to let things be seen in their interpretedness, that is, in exactly the way we encounter and have to deal with them. The way we primarily encounter a hammer is, according to the example referred to above, one in which we have to deal with it *as* a tool for pounding nails into the wall rather than as a neutral thing out there awaiting theoretical inspection. Hermeneutics can therefore no more remain confined to the realm of an auxiliary discipline of the human sciences – as it has been traditionally conceived within a pre-established realm of sciences up to and inclusive of Dilthey – for the case is simply not that interpretation takes place only concerning “life manifestations objectified in written form.” As an interpreting animal, man interprets being as well; and Heidegger formulates his being-question specifically as a question of the *meaning* of being.

This re-evaluation of interpretation implies that hermeneutics cannot remain a subordinate discipline of the human sciences, but becomes, as Heidegger explicitly states, “the self-interpretation of facticity.”¹⁴ It is important to see that this “self-interpretation of facticity” is not a kind of anthropology, simply a matter of our having to do with ourselves, implying that other beings of the world are left untouched. Insofar as humans are precisely the beings who describe the world in its entirety, hermeneutics becomes linked to ontology – a major reason why in the title of the 1923 course “hermeneutics of facticity” and “ontology” occur together, clearly anticipating the correlation of fundamental ontology and existential analytic in *Being and Time*.¹⁵

I.3. Let me now return to a more global view of hermeneutics and try to spell out some aspects of its significance. The general (and traditional) philosophical significance of hermeneutics may be seen to lie in the fact that philosophy has been handed down in texts; wherever we look we have to do with texts which require interpreting, appropriating, and handing over – but even refutation and criticism are not productive unless based upon a preliminary understanding of what the texts to be refuted or criticized have to say. The relevance which hermeneutics has for the sciences is provided, second, by the fact that hermeneutical thinking illuminates some wider horizons of life, or of the life-world into which the sciences themselves as particular forms of socio-historical human activity are embedded. Last but not least, hermeneutics also has some considerable political relevance: hermeneutic openness, as an attitude essential to this thinking, may help educate and bring up people to be critical and self-critical citizens, able to understand and respect alien conceptions and cultures – life-worlds other than their own. In a pluralistic universe, what Gadamer calls a “logic of questioning and answering”¹⁶ becomes particularly important in helping us work out a mutual understanding (*Verständigung*). Understanding a text is, from a hermeneutical viewpoint, understanding it together with its truth claims, on the one hand, and letting the text challenge our own criteria of judging it on the other. The main hermeneutic error one may commit in interpreting philosophical texts lies, from a Gadamerian viewpoint, not so much in applying false or bizarre criteria but, rather, in making the viewpoints and the criteria of our confrontation with the text inaccessible to critical scrutiny.¹⁷

Hermeneutics may thus be claimed to have an openly political and practical import lying in its anti-dogmatic character. This originates from its rejection of the notion that the criteria for judging a text are inaccessible to critical scrutiny. What may be called the basic hermeneutic attitude or comportment, that is, openness, makes possible a new relation both to the past and present. In and with hermeneutics, “[r]ather than some version of epistemological relativism, we get something closer to what may be dubbed ontological and cultural pluralism.”¹⁸

Against the background of some of its major claims thus reconstructed, hermeneutics has a multiple presence in various branches of current philosophical research. First, there is the history of hermeneutics, especially in the 19th and 20th centuries, from Romanticism through the German *geisteswissenschaftlich* tradition up to Heidegger and Gadamer, including also their critics (such as Habermas) and contemporary French developments up to and including Derrida and Ricœur. A second autonomous field may be singled out by reference to the relevance of a hermeneutical approach for other philosophical or scientific disciplines – the relevance hermeneutics has with regard to theology, ethics, aesthetics, theory of literature, sociology, phenomenology, philosophy of language, practical philosophy, politics. A third field is provided by the self-reflection, self-interpretation, of contemporary hermeneutics, to be explored by going back to its sources, i.e. Heidegger’s early hermeneutics. This third aspect is in a certain sense the most important one, for it decides what it exactly is that is to count as “hermeneutics”, “hermeneutical”, in the other two (historical, systematic) areas, and thus helps prevent employing the concept of hermeneutics itself anti-hermeneutically, i.e. dogmatically, in a way inaccessible to critical inquiry.

* * *

II. From among the various fields of relevance that hermeneutics may have, the one this conference is to address is especially interesting, namely, the much debated question of the relevance of hermeneutics for the sciences. Heidegger wrote in *Being and Time* that the classical ideal of knowledge, which insists on avoiding the hermeneutic circle, is “only a subspecies of understanding [...] which has strayed into the legitimate task of grasping the present-at-hand in its essential unintelligibility [Unverständlichkeit].”¹⁹ Heidegger thus sees here a “legitimate task”, namely that of “grasping the present-at-hand,” even if he then adds that the present-at-hand is essentially unintelligible. But if such is the case, does any significant way of grasping the present-at-hand remain other than the one made possible by what has been called explanation, *Erklären*? The kind of knowledge that takes place in the field of the natural sciences seems for Heidegger to be inaccessible to hermeneutical understanding. Thereby, he seems tacitly to subscribe to the *wissenschaftstheoretisch* dualism of *Verstehen* and *Erklären* adopted by Dilthey, suggesting that only the human world can be deciphered and approached by hermeneutics – can be viewed as being meaningful, that is, meaning-laden – while nature is, as Dilthey suggested, mute for

us. With regard to nature our knowledge is explanation, concerning consciousness it is understanding. “We explain nature, and we understand spirit,” says Dilthey (“Die Natur erklären wir, das Seelenleben verstehen wir”).²⁰ That is also the reason why Dilthey claims that something such as the “understanding of nature” is an improper or just an approximate or “metaphorical” expression (“Verstehen der Natur – interpretatio naturae – [...] ein bildlicher Ausdruck”).²¹

Still, the topic “Heidegger and science” has been addressed in various ways, taking on more and more extensive proportions in the past two decades, by drawing mainly on Heidegger’s view of scientific activity or research as one way of man’s Being-in-the-world. The emergence of this utilization of Heidegger’s work was obviously linked to, and prompted by, the influence of Thomas Kuhn’s new view of the structure of scientific revolutions – a view that itself proved to have a revolutionary impact upon mainstream Anglo-American philosophy of science. In a paper published in 1977, Theodore Kisiel discussed this relevance, by first remarking that “[t]o some, [this] combination undoubtedly still sounds strange, let alone fruitful and worthy of extended consideration.”²² He then proceeded to reconstruct in Heidegger “an existential conception of science, distinct from his earlier logical conception”, and distinguished eventually also a third “approach to science” that “can be labeled the ‘metaphysical’ or ‘epochal’ conception of science.”²³ In accordance with the “anti-positivist revolt of major proportions in the philosophy of science” which had been going on in the last decade, he went on to argue, the new approaches had shifted “the locus of the essence of science in a direction which appears quite amenable to the direction suggested by Heidegger’s existential conception of science.”²⁴ This acknowledgment was supported by the recognition that between philosophy and science Heidegger viewed not only an “essential difference,” as had been overdramatically stated in previous decades, but also a “necessary relationship,” and that, accordingly, his provocative thesis that science does not “think” does not in the least imply an arrogant dismissal (or not even a misconstrual) of *factual* scientific activity.²⁵ Since “the new philosophies of science rely more heavily on historical case studies of the actual process of science,” we may be entitled to speak about a hermeneutical dimension, in addition to a psychological and a logical one, present in the dimensions of scientific discovery.²⁶ In addition to and

[c]ontrary to the logical analysis of the finished products of science which positivism made central, [the] more historical approach placed primacy on the scientific process in a pragmatic context and [...] especially on those events which induced change in the [...] scientific discoveries. Contrary to the inveterate tendency to regard scientific discovery in terms bordering on the irrational, such as intuition, inspiration [...], genius, the working of the unconscious [...], it was now possible to envisage a rational basis, perhaps even a “logic” for scientific discovery by regarding it in the contextual field out of which it emerged.²⁷

Regarded in such a context, on Heideggerian grounds, Joseph J. Kockelmans earlier developed the point that “[e]ach science projects its scientific ‘world’, its domain of meaning, in its own way. [...] The bond among these ‘worlds’ consists in the fact that all of them have been born from the world immediately

lived by the community of man.”²⁸ The emphasis laid on the aspect of the scientific community and its socially embedded character has then remained a basic issue in the hermeneutically oriented philosophy of science ever since. Recently, Patrick Heelan has argued for Heidegger’s thesis that “to be human is to-be-there-in-the-world,” and for an ensuing “ontology” – as opposed to an “epistemology” – of scientific research. This is based on the principle that “whatever scientific representations do, they do it only as a function of what human understanding is,” and that “the activity of understanding is to be defined as the ontological activity of local communities constituting local beings as known within the ontological horizon of Being.”²⁹ On this point, we should not forget that Gadamer himself – referring to Kuhn’s work and those parts of Heidegger’s later thinking which anticipate Kuhn’s concept of “paradigm” – came eventually to believe that “in the natural sciences, too, there lies something such as a hermeneutical problematic.”³⁰ Given the ever growing acknowledgment and appreciation of the hermeneutic thesis regarding the universal scope of interpretation – namely, that understanding and interpretation take place in all segments or sectors of the human world, not only in the human sciences, as I have attempted to show above in my reconstruction of Heidegger’s ontological transformation of the concept of understanding and interpretation – one has reason to accept the claim of Charles Taylor that, paradoxically, it is precisely hermeneutics that accomplishes the program of unified science. Indeed, Taylor argues, hermeneutics cannot be confined to the domain of the human sciences; “all sciences are equally hermeneutic.”³¹

Parallel with such recognitions, the once dominant view of Heidegger as a bitter opponent to, or even a mortal enemy of, science and technology gradually began undergoing an essential change. “It is not Heidegger’s intention to do away with the sciences, or to denounce them as spurious,” wrote John D. Caputo already in the seventies, rectifying misconstrued and exaggerated criticisms of Heidegger’s conception of science. “His intent is simply to restrict the claim of the sciences [...] to absolute validity [...]”³² Nowadays, Heidegger has ultimately come to be known “as one of the foremost philosophers of technology” or, in any case, “the founder of contemporary philosophy of technology.”³³

One way of restricting “the validity” of science is to put it into a larger context. This is a critical endeavour which also permeates Gadamer’s hermeneutic effort, which he explicitly claims as having relevance for the philosophy of science.³⁴ Compared with early attacks on hermeneutics for its allegedly “irrational” character and socially “conservative” role, Gadamer’s hermeneutics has an essentially critical and even demythologizing function. This consists in his having shown the Enlightenment project of a total illumination as being illusory and empty – indeed, as being itself a myth. Significantly, he showed this precisely in his defense and rehabilitation of the prejudices and the authorities or, in other words, by revealing enlightenment thinking as being insufficiently exempt from prejudices – that is, of being prejudiced against the prejudices.³⁵ In like manner, with regard to the philosophy of science, Don Ihde has recently claimed that “hermeneutics has a *demythologizing* function.” In the context of the philosophy of science and technology, this implies “demytholo-

gizing exaggerated myths concerning science,” i.e. the “quasi-religious belief that adheres to science as socially salvific [...]”³⁶

* * *

Against the background of the approach to “scientific discovery by regarding it in the contextual field out of which it emerged,” as well as of “the emergent consensus [...] that science must be seen as *one* of many human intellectual and cultural activities,”³⁷ it becomes possible to reasonably and meaningfully ask questions of a new sort. Some of these questions are addressed in the newsletter and the circular of this conference, for example, regarding the possibility of a hermeneutic approach to science, the possibility for hermeneutics to bridge the gap between natural sciences and the humanities.

With my last remarks I have already touched upon issues around which this conference is to centre. I think it is at this point that an opening address should finish if – hermeneutically speaking – it wants to open up a horizon and not immediately close it as well – if it wants to be stimulative and inspiring, rather than pedantic and stuffy.

I wish you all interesting discussions and – apropos of hermeneutics – a thriving and hermeneutically fruitful dialogue.

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NOTES

¹ That is how Richard Rorty summed up, the continentalists’ typical charge against analytic philosophy; see his “Philosophy in America Today,” in Rorty, *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), p. 225.

² That is Roger Scruton’s quip, concerning hermeneutics, in his recent paper “The Harrowed Tradition” (*Partisan Review* LX, 1993, n. 2), p. 214. Although – or precisely because – the conservative theorist Scruton is neither an analytic philosopher nor a philosopher of science in any customary sense of these terms (and the paper quoted is moreover engaged particularly in a defense of the classical philosophical tradition, that is, in something that is typically the continentalists’ business in their quarrel with analysts), this way of putting things shows how deeply certain idioms are rooted, and that, eventually, this way of speaking tends to crop up whenever there is a failure of understanding – be it that of understanding *understanding*.

³ See, e.g., Heidegger’s “Offenheit zum Geheimnis” in *Gelassenheit* (Pfullingen: Neske, 1959), p. 24, and Rorty’s reference to hermeneutics as “a description of our study of the unfamiliar” in *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1979), p. 353. See also Gadamer’s urge of “Offenheit für die Meinung des anderen oder des Textes” in *Wahrheit und Methode (Gesammelte Werke, vol. 1* [Tübingen: Mohr, 1990], p. 273), and of “Erfahrungsbereitschaft” (*ibid.*, p. 367), as well as his thesis: “Die ‘hermeneutische’ Philosophie [...] besteht darauf, daß es kein höheres Prinzip gibt als dies, sich dem Gespräch offenzuhalten” (*Gesammelte Werke, vol. 2* [Tübingen: Mohr, 1986], p. 505).

⁴ See, e.g., H.-G. Gadamer, “Einführung,” in *Seminar: Philosophische Hermeneutik*, eds. H.-G. Gadamer, G. Boehm (Frankfurt/Main: Suhrkamp, 1976), p. 7; K.-O. Apel, “Heideggers philosophische Radikalisierung der ‘Hermeneutik’ und die Frage nach dem ‘Sinnkriterium’ der Sprache,” in his *Transformation der Philosophie*, vol. 1 (Frankfurt/Main: Suhrkamp, 1976), p. 278; Jean Grondin, *Einführung in die philosophische Hermeneutik* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1991), p. 1; Hans Ineichen, *Philosophische Hermeneutik* (Freiburg/München: Alber, 1991), pp. 17, 21f., 56.

⁵ W. Dilthey, "Die Entstehung der Hermeneutik (1900)," *Gesammelte Schriften*, vol. 5, ed. G. Misch (Göttingen: Vandenhoeck & Ruprecht, 1957), p. 318 ("Wir nennen den Vorgang, in welchem wir aus Zeichen, die von außen sinnlich gegeben sind, ein Inneres erkennen: *Verstehen*").

⁶ *Ibid.*, p. 332: "Das kunstmäßige Verstehen von schriftlich fixierten Lebensäußerungen nennen wir Auslegung, Interpretation."

⁷ *Ibid.*, p. 332f.: "Diese Kunstlehre des Verstehens schriftlich fixierter Lebensäußerungen nennen wir Hermeneutik."

⁸ See M. Heidegger, *Sein und Zeit* (Tübingen: Niemeyer, 1979), p. 143: "»Verstehen« [...] im Sinne einer möglichen Erkenntnisart unter anderem, etwa unterschieden von »Erklären«, muß mit diesem als existenziales Derivat des primären, das Sein des Da überhaupt mitkonstituierenden Verstehens interpretiert werden." See also *Prolegomena zur Geschichte des Zeitbegriffs*, Gesamtausgabe, vol. 20, ed. P. Jaeger (Frankfurt/Main: Klostermann, 1979), 358; *Grundprobleme der Phänomenologie*, Gesamtausgabe, vol. 24, ed. F.-W. von Herrmann (Frankfurt/Main: Klostermann, 1975), 390f. ("Verstehen ist eine ursprüngliche Bestimmtheit der Existenz des Daseins, abgesehen davon, ob das Dasein erklärende oder verstehende Wissenschaft treibt. [...] am Ende ist das Verstehen überhaupt nicht primär ein Erkennen, sondern [...] eine Grundbestimmung der Existenz selbst"), 392 ("Die erklärenden und verstehenden Wissenschaften [...] sind nur möglich, weil das Dasein in sich selbst als existierendes verstehendes ist"). – *Bibliographical remark*: Heidegger's *Gesamtausgabe* volumes will be cited with full bibliographical data at their first occurrence; at subsequent occurrences they will be cited as GA followed by volume and (after colon) page numbers. For example (in the case of the above references): "GA 20: 358"; "GA 24: 390f., 392."

⁹ M. Heidegger, *Sein und Zeit*, § 33: pp. 153ff.

¹⁰ *Sein und Zeit*, p. 157 (see *Being and Time*, transl. by J. Macquarrie, E. Robinson [New York: Harper & Row, 1962], p. 200).

¹¹ *Wegmarken*, Gesamtausgabe, vol. 9, ed. F.-W. von Herrmann (Frankfurt/Main: Klostermann, 1976), p. 32; *Zur Bestimmung der Philosophie*, Gesamtausgabe, vol. 56/57, ed. Heimbüchel (Frankfurt/Main: Klostermann, 1987), p. 117.

¹² See Heidegger, *Phänomenologische Interpretationen zu Aristoteles. Einführung in die phänomenologische Forschung*, Gesamtausgabe, vol. 61, ed. W. Bröcker and K. Bröcker-Oltmanns (Frankfurt/Main: Klostermann, 1985), pp. 89ff.; "Phänomenologische Interpretationen zu Aristoteles (Anzeige der hermeneutischen Situation)," ed. H.-U. Lessing (hereafter quoted with the abbreviation PIA), *Dilthey-Jahrbuch für Philosophie und Geschichte der Geisteswissenschaften* 6 (1989), p. 240.

¹³ See GA 61: 86f.; PIA 241, 264; for later, see GA 20: pp. 75, 190, 416; *Sein und Zeit*, pp. 169, 383.

¹⁴ *Ontologie (Hermeneutik der Faktizität)*, Gesamtausgabe, vol. 63, ed. K. Bröcker-Oltmanns (Frankfurt/Main: Klostermann, 1988), pp. 14.

¹⁵ For Heidegger's considerations on hermeneutics in his radicalized sense, and on its relation to hermeneutics in the traditional sense, see GA 63: 9ff., 14f.; *Sein und Zeit*, pp. 37f., 142ff. 148ff.; GA 20: 356ff., 415.; *Der Begriff der Zeit. Vortrag vor der Marburger Theologenschaft. Juli 1924*, ed. H. Tietjen (Tübingen: Niemeyer, 1989), p. 26. For later, see *Unterwegs zur Sprache*. (Pfullingen: Neske, 1982), pp. 95ff. I have treated Heidegger's postwar hermeneutic turn in more detail in my papers "Phenomenology, Hermeneutics, *Lebensphilosophie*: Heidegger's Confrontation with Husserl, Dilthey, and Jaspers" (*Reading Heidegger from the Start. Essays in His Earliest Thought*, eds. Th. Kiesel and J. van Buren [Albany, N. Y.: State University of New York Press, 1994], pp. 73-89) and "Heidegger's Postwar Turn: The Emergence of the Hermeneutic Viewpoint of His Philosophy and the Idea of 'Destruktion' on the Way to *Being and Time*" (*Selected Studies in Phenomenology and Existential Philosophy*, SPEP Supplementary issue, *Philosophy Today*, Spring 1996).

¹⁶ See Gadamer, *Gesammelte Werke*, vol. 1, pp. 375ff.

¹⁷ In a phenomenological-hermeneutic view, the criteria of philosophical criticism are also redefined. The only reasonable phenomenological criterion of critique is claimed to rest on situational or motivational grounds; purely free-floating, "conceptual" questions are to be avoided (GA 56/57: 125ff., see GA 63: 71). See in this regard also the Heideggerian-Gadamerian distinction between "questions," "questioning," and "problems" (in the sense of free-floating Neo-Kantian "Problemgeschichte"): GA 63: 5; *Metaphysische Anfangsgründe der Logik im Ausgang von Leibniz*, Gesamtausgabe, vol. 26, ed. by K. Held (Frankfurt/Main: Klostermann, 1978), p. 197; *Grundfragen der Philosophie. Ausgewählte »Probleme« der »Logik«*, Gesamtausgabe, vol. 45, ed. by F.-W. von Herrmann (Frankfurt/Main: Klostermann, 1984), p. 7f; Gadamer, *Wahrheit und Methode*, in *Gesammelte Werke*, vol. 1, pp. 381ff. It is not indifferent to note that, in this hermeneutic view, the "conceptual" question of what hermeneutics "really" is turns out to be no

less meaningless. For more on this point, see my paper "Gibt es *die* Hermeneutik? Zur Selbstreflexion und Aktualität der Hermeneutik Gadamer'scher Prägung" (forthcoming in *Internationale Zeitschrift für Philosophie* V, 1996).

¹⁸ Robert Hollinger, "Introduction," in *Hermeneutics and Praxis*, ed. R. Hollinger (Notre Dame, Indiana: Notre Dame University Press, 1985), p. xiv.

¹⁹ *Sein und Zeit*, p. 153. See also GA 20: 356.

²⁰ "Ideen über eine beschreibende und zergliedernde Psychologie," in *Gesammelte Schriften*, vol. 5, p. 144.

²¹ "Die Entstehung der Hermeneutik," in *Gesammelte Schriften*, vol. 5, p. 318.

²² Theodore Kiesel, "Heidegger and the New Images of Science," *Research in Phenomenology*, 6 (1977), p. 162.

²³ *Ibid.*, p. 163.

²⁴ *Ibid.*, p. 165. See, in this regard, Rainer A. Bast's reconstruction of Heidegger's "existenzialer Wissenschaftsbegriff" in his book *Der Wissenschaftsbegriff Martin Heideggers im Zusammenhang seiner Philosophie* (Stuttgart - Bad Cannstatt: Frommann-Holzboog, 1986), pp. 94ff., 118ff.

²⁵ See Joseph J. Kockelmans, "Heidegger on the Essential Difference and Necessary Relationship Between Philosophy and Science," in *Phenomenology and the Natural Sciences. Essays and Translations*, eds. Joseph J. Kockelmans, Theodore J. Kiesel (Evanston: Northwestern University Press, 1970), pp. 147-166, esp. 148. See also Theodore J. Kiesel, "Science, Phenomenology, and the Thinking of Being," *ibid.*, pp. 167-183, esp. p. 173f. For one of the first utilizations of Heideggerian perspectives for the philosophy of science, namely, utilization of concepts such as "intimacy" or "familiarity," in the sense that "a kind of intimacy characterizes the context of theories," see Wilhelm Szilasi, "Experience and Truth in the Natural Sciences," *ibid.*, pp. 205-232, esp. p. 229 (Szilasi's paper was originally a lecture delivered in Freiburg in 1949 and subsequently published in *Kosmos, Tier, Mensch* [Freiburg i.Br.: Alber, 1949] and as "Erfahrung und Wahrheit in den Naturwissenschaften" in *Philosophie und Naturwissenschaft* [Bern: Francke, 1961], pp. 25-51).

²⁶ T. Kiesel, "Heidegger and the New Images of Science," p. 165.

²⁷ T. Kiesel, "A Philosophical Self-Introduction," in *American Phenomenology: Origins and Developments* (Analecta Husserliana, vol. XXVI), eds. E. F. Kaelin, C. O. Schrag (Dordrecht - Boston - London: Kluwer, 1989), p. 238.

²⁸ Joseph J. Kockelmans, "Heidegger on the Essential Difference and Necessary Relationship Between Philosophy and Science," p. 165. On the hermeneutical dimensions of natural science, see now Kockelmans' detailed analyses in his recent book *Ideas for a Hermeneutic Phenomenology of the Natural Sciences* (Dordrecht - Boston - London: Kluwer, 1993), esp. pp. 100ff., 104ff. For a discussion of Kiesel's views on this point, see *ibid.*, pp. 108ff.

²⁹ Patrick A. Heelan, "Theory of Social-Historical Phenomena: Quantum Mechanics and the Social Sciences," paper given at the 1993 meeting of the *Society for the Philosophy of the Human Sciences* (forthcoming).

³⁰ H.-G. Gadamer, "Selbstdarstellung," in: Gadamer, *Hermeneutik II: Wahrheit und Methode. Ergänzungen - Register. Gesammelte Werke*, vol. 2 (Tübingen: Mohr, 1986), p. 496. See also *ibid.*, p. 3f.: "Daß in den Naturwissenschaften eine hermeneutische Problematik eingeschlossen ist, wurde mir bereits 1934 an Moritz Schlicks siegreicher Kritik des Dogmas von den Protokollsätzen klar."

³¹ Charles Taylor, "Understanding in Human Science," *The Review of Metaphysics* XXXIV (1980), p. 26. On this point, see Joel C. Weinsheimer, "Introduction: Hermeneutics and the Natural Sciences," in Weinsheimer, *Gadamer's Hermeneutics. A Reading of Truth and Method* (New Haven: Yale University Press, 1985), pp. 17, 36. Weinsheimer provides here a detailed and useful comparative examination of Gadamer's hermeneutic claims, inclusive of his underlying understanding of the natural sciences, with the most important achievements of recent philosophy of science.

³² John D. Caputo, *The Mystical Element in Heidegger's Thought* (Athens - Ohio - London: Ohio University Press, 1978), pp. 264f.

³³ Don Ihde, *Technology and the Lifeworld. From Garden to Earth* (Bloomington and Indianapolis: Indiana University Press, 1990) pp. 31, 21.

³⁴ See Gadamer, *Gesammelte Werke*, vol. 2, p. 450: "Die philosophische Hermeneutik gliedert sich [...] einer philosophischen Bewegung unseres Jahrhunderts ein, die die einseitige Orientierung am Faktum der Wissenschaft überwand [...]. Die Hermeneutik hat gleichwohl *wissenschaftstheoretische Relevanz*, sofern sie innerhalb der Wissenschaften durch hermeneutische Reflexion Wahrheitsbedingungen aufdeckt, die nicht in der Logik der Forschung liegen, sondern ihr vorausgehen" (my italics).

³⁵ Gadamer, *Gesammelte Werke*, vol. 1, 276ff, 281ff.

³⁶ Don Ihde, *Technology and the Lifeworld*, p. 202.

³⁷ See the quote at note above, and D. Ihde, *Technology and the Lifeworld*, p. 202f.